

# Space Economic Data in Europe



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- + Eurospace, founded 1962, is the association of the European space industry (55 members).
- + Eurospace represents the European space industry with ESA and the EU.
- + Eurospace fosters the betterment of industry through dialogue and cooperation.



# Space Economic Data in Europe

- The situation in Europe:

- ▶ space relevant data is usually NOT readily available
- ▶ space sector is seldom recognized as such
  - + at best: included in aerospace
  - + sector boundaries badly defined
    - ▲ from R&T to services provisions
- ▶ space activities organization is not yet well understood
- ▶ space data collections are often biased
  - + 'ad hoc' assessments often lack internal or external consistency

# Space Economic Data in Europe

- Space relevant data available in Europe (demand side)
  - ▶ Civil Public budgets:
    - ✗ Data publicly available (in theory)
      - + Major space agencies publish their annual budgets (ESA, CNES, DLR, BNSC) - but not their expenditures...
      - + Smaller space agencies: varying policies
    - ✗ Beware of overlapping figures
  - ▶ Military Public Budgets
    - ✗ A marginal figure, not well documented

# Space Economic Data in Europe

- Space relevant data available in Europe (supply side)
  - ▶ Space industry activity (manufacturing)
    - ✗ Not considered a sector by itself by officials
    - ✗ Hence methodology problems
      - + products poorly defined (structures/propulsion/equipment)
      - + sector boundaries problem
      - + NO consolidation performed (inflated data)
    - ✗ BUT there is important demand for economic impact measures
      - + locally: e.g. fair return
      - + globally: industry benchmarking

# Space Economic Data in Europe

- Space relevant data available in Europe (supply side)
  - ▶ Space industry activity (manufacturing)
    - ✕ Data production/collection bodies
      - + European Union (Eurostat) : aerospace sales survey
      - + ESA: cumulated contracts value
      - + BNSC: the UK space sector (industry statistics)
      - + National Aerospace industries associations (BDLI, GIFAS...)
      - + Eurospace Facts and Figures
        - ▲ Since 1996: the sole stabilised source for space industry activity information
        - ▲ Latest data available: [www.eurospace.org/factsandfigs.html](http://www.eurospace.org/factsandfigs.html)

# Space Economic Data in Europe

- Space relevant data available in Europe (services)
  - ▶ Space industry activity (services)
    - ✗ The services markets are not well known
      - + Telecoms Satellite operators, DTH Broadcast, VSAT...
      - + Meteorological services
      - + Localisation
      - + Sale/Use of EO data...
    - ✗ Existing body of data produced by consultancy firms and ad hoc market studies (not publicly available)
      - + Euroconsult, Vista Advisers

# Space Economic Data in Europe

## ● Eurospace Facts and Figures

- ✕ The survey
- ✕ The population - the respondents
- ✕ Why Eurospace?
- ✕ Data users
- ✕ The questionnaire
- ✕ The results
- ✕ The new questionnaire

# Space Economic Data in Europe

## ● Eurospace Facts and Figures

### ► The survey:

- ✕ 250 questionnaires sent in March
- ✕ 120 (average) replies received by September
- ✕ 100 (average) company data treated by October
- ✕ Data consolidation & corrections (use of control data)
- ✕ Full data publicly released in December/January
- ✕ Data year N available beginning year N+2



# Space Economic Data in Europe

## ● Eurospace Facts and Figures

### ▶ The population - the respondents:

#### ✕ questionnaire is aimed at

- + Space hardware and software manufacturers
- + Service providers to industry (ground stations operation, engineering and test services etc.)
- + Launch services providers

▲ (the new questionnaire will cover the whole value chain)

#### ✕ respondents vary depending on company size

- + space manager, sales people, accounting, HR...

# Space Economic Data in Europe

## ● Eurospace Facts and Figures

### ► Why Eurospace?

- + Industry data is needed by industry (benchmarking, sector evaluation, macro view)
- + And by public authorities (same reasons + industrial policy assessment)
- + Such data can only be collected by a not for profit independent body:
  - ▲ Individual data confidentiality and data release control guarantee data accuracy
  - ▲ prevents from adverse use of data and information distortion (as may occur with consultants or agencies)

# Space Economic Data in Europe

## ● Eurospace Facts and Figures

### ▶ Known Data users

- + ESA industrial policy
- + ESA national delegations (national impact evaluation)
- + EU Eurostat (Panorama of the European Industry)
- + EC DG Research, DG InfSoc, DG Industry
- + National Aerospace associations (GIFAS, BDLI) for sectoral analysis
- + Eurospace member companies (benchmarking, market shares evaluation)

### ▶ Data is available on the internet

# Space Economic Data in Europe

## ● Eurospace Facts and Figures

### ▶ The questionnaire

- ✕ 1 page

- ✕ 7 sections

- Employment information

- Turnover information

- Turnover distribution by end customer

- Turnover distribution by activity/product

- Company activity

- Subsidiaries list

- Capital ownership

# Space Economic Data in Europe

## ● Eurospace Facts and Figures - results

### ► Turnover & employment information by country

Data 1999, in Euro thousands

Country	Employment	Turnover	Cons. Turn.
Austria	203	32 580	26 403
Belgium	1 447	240 035	211 209
Denmark	369	51 399	51 399
Finland	223	24 070	21 340
France	12 813	4 158 165	2 412 885
Germany	6 080	1 600 827	922 391
Ireland (estim)	62	6 000	6 000
Italy	5 837	1 155 208	879 110
Netherlands	502	104 857	91 482
Norway	353	49 488	42 705
Portugal (esti)	20	2 000	2 000
Spain	1 418	223 264	132 948
Sweden	766	103 149	95 429
Switzerland	480	121 002	116 615
United Kingdom	3 035	516 047	469 247
Total Europe	33 608	8 388 091	5 481 163

- Concentration ratio: 0.65 (0.42 in 96)
- Labor productivity: 163 kEUR/worker

# Space Economic Data in Europe

## ● Eurospace Facts and Figures - results

### ► Cons. turnover & employment by type of company

in Euro millions

Distribution by type of company	1996	1997	1998	1999
Prime (large systems)	2 887,0	2 779,0	3 182,0	3 053,0
Other prime and subsystem suppliers	955,0	1 667,0	1 580,0	1 592,3
Equipment suppliers	216,0	482,0	204,0	371,9
Software, support, test and services t	213,0	93,0	72,0	148,8
Launch services providers	121,0	64,0	199,0	288,9
Other services (telecoms, ground sta	164,0	62,0	82,0	261,5

Distribution by type of company	1996	1997	1998	1999
Prime (large systems)	19729	18304	19424	18724
Other prime and subsystem suppliers	7997	11916	11791	10680
Equipment suppliers	2397	3275	1945	2513
Software, support, test and services to	1732	1237	999	1191
Launch services providers	330	358	384	377
Other services (telecoms, ground stati	164	301	340	123

● Consolidated  
Turnover

● Employment

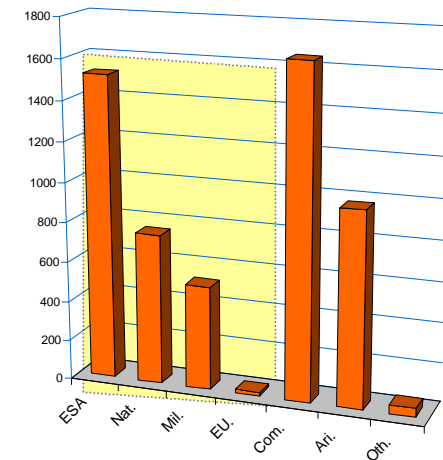
# Space Economic Data in Europe

## ● Eurospace Facts and Figures - results

### ► Cons. turnover by end customer

Distribution by customer	1996	1997	1998	1999
ESA	1 835,0	1 501,0	1 674,0	1 520,8
National Civil Programmes	467,0	794,0	617,0	754,3
National Military Programmes	519,0	383,0	512,0	521,8
Commercial Sales	987,0	1 450,0	1 524,0	1 647,2
Arianespace Contracts	578,0	943,0	931,0	976,2
European Comm. Contracts	45,0	14,0	17,0	16,9
Other Contracts (or unidentified)	124,0	61,0	42,0	44,0

in Euro millions



Data: 1999

# Space Economic Data in Europe

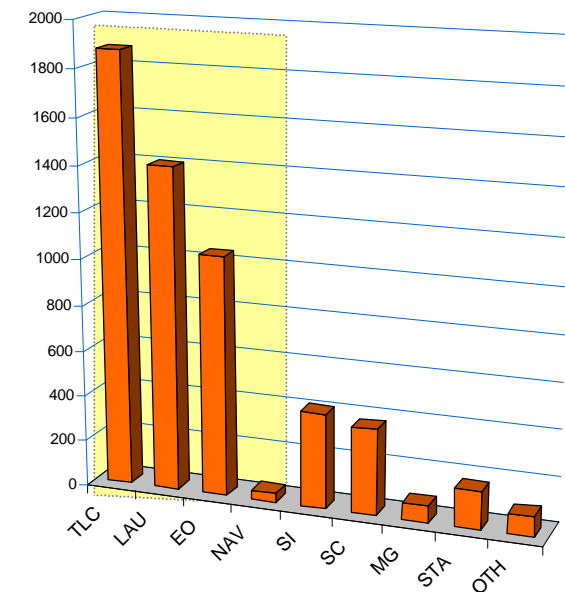
## ● Eurospace Facts and Figures - results

### ► Cons. turnover by activity

+ (New questionnaire will consider products instead for more accuracy)

Distribution by activity	1996	1997	1998	1999
Telecommunications	1 190,0	1 486,0	1 609,0	1 875,0
Earth Observation	1 006,0	888,0	917,0	1 042,6
Navigation/localisation/positioning*				39,7
Launcher Prod. & Devt	1 306,0	1 590,0	1 551,0	1 405,0
Space Infrastructure and Mann	262,0	442,0	378,0	415,2
Science	433,0	365,0	555,0	376,4
Microgravity	64,0	66,0	84,0	72,4
Support Activities	220,0	173,0	156,0	165,1
Other Disciplines (or unidentifie	74,0	137,0	69,0	89,8
*Category added in 1999 - included in TLC before				

in Euro millions



Data: 1999



# Space Economic Data in Europe

- Eurospace Facts and Figures - new questionnaire
  - ▶ European Space industry economic indicators
    - ✕ expands the range of data collection with:
      - + financial information
      - + order intake/backlog information
      - + export/import information
      - + employment demographics
    - ✕ refined description of company activities and products
      - + introduces the notion of RTD as an output
      - + allows better market quantification/characterization

# Space Economic Data in Europe

- Eurospace Facts and Figures - new questionnaire
  - ▶ European Space industry economic indicators (ctd.)
    - ✖ clear identification of position on the value chain
      - + to allow for better visibility on the consolidation process
      - + accommodates all space activities, from manufacturing to service provisions
      - + allow for measure of relative market power
    - ✖ maintains coherence with previous years
      - + essential to build historical series

# Space Economic Data in Europe

- Eurospace Facts and Figures - new questionnaire
  - ▶ European Space industry economic indicators (ctd.)
    - + labor productivity (AV/employment)
    - + labor profitability (RoS/employment)
    - + capital productivity (AV/net assets)
    - + Capital profitability (RoA)
    - + market visibility indicators (order book/turnover)
    - + concentration ratio (AV/sales)
    - + customer dependence ratio
    - + competitiveness ratio
    - + foreign market dependence/penetration
    - + etc.

# Space Economic Data in Europe

- What next?

- ▶ Focus on cost and competitiveness

- ✗ need to better understand industry costs

- + focus on the industrial process

- + analyze cost drivers

- ✗ how to assess competitiveness with captive markets?

- ▶ Focus on markets, captive markets, price determinants

- ✗ market structures

- ✗ price takers or price makers?